What is claimed is:

1. A method to produce water soluble carbohydrates from lignocellulose,

which comprises:

providing lignocellulose containing cellulose and

providing enzymes to said cellulose, and

providing a membrane to divide a filtrate, and

combining the extractate, from a previous extraction, with said lignocellulose, and

subjecting said cellulose, contained in lignocellulose, to hydrolysis, at a pH of about 5, by said enzymes to create said water soluble carbohydrates and produce a residue containing lignins, and

filtering said residue containing lignins from said water soluble carbohydrates containing enzymes to produce a filtrate and a filtered residue, and

extracting the filtered residue containing lignins with water to substantially extract water soluble carbohydrates from the residue to produce a water extracted residue and an extractate for recycle, and

employing said membrane to substantially divide said filtrate containing water soluble carbohydrates and enzymes to provide water soluble carbohydrates substantially devoid of enzymes and provide enzymes for hydrolysis of cellulose contained in said lignocellulose thereby water soluble carbohydrates substantially devoid of enzymes are formed from lignocellulose and a residue containing lignins substantially devoid of water soluble carbohydrates is formed.

2. The method of claim **1** wherein said hydrolysis is accomplished in a vessel.

3. The method of claim **1** wherein said filtrate is subjected to ultrafiltration to substantially separate enzymes from the water soluble carbohydrates and form a solution substantially devoid of enzymes and recycle the separated enzymes for subsequent hydrolysis of cellulose contained in a lignocellulose.

4. The method of claim **3** wherein the, solution containing water soluble carbohydrates, is subjected to hydrolysis and fermentation to form ethanol.

5. The method of claim **1** wherein said lignocellulose is obtained from biomass selected from the group consisting of wood, waste paper and municipal solid waste including an individual or a combination thereof.

6 The method of claim **1** wherein said lignocellulose is provided from dilute acid hydrolysis of a biomass to provide a lignocellulose substantially devoid of hemicellulose.

7 The method of claim **1** wherein said enzymes are selected from the group consisting of cellulase, glucanhydrolase and, cellobiohydrolase including an individual or a combination thereof.

8. The method of claim **1** wherein said lignocellulose containing cellulose is accessible to enzymes.

9. The method of claim **1** wherein said extractate contains water soluble carbohydrates.

10. The method of claim **1** wherein said water soluble carbohydrates contain glucose.

11. The method of claim **1** wherein said water soluble carbohydrates contain glucose polymers.

12. The method of claim **1** wherein said water soluble carbohydrates contain cellodextrins.

13. The method of claim **1** wherein said enzymes derived from ultrafiltration are recycled to provide enzymes to said cellulose contained in a lignocellulose.

14. The method of claim **1** wherein said water soluble carbohydrates containing enzymes are absorbed by cellulose to provide absorbed enzymes for hydrolysis of cellulose contained in a lignocellulose.

15. The method of claim **1** wherein said water soluble carbohydrates are subjected to hydrolysis to form glucose.

16. The method of claim **1** wherein said method is continuous.

17. The method of claim **1** wherein said lignocellulose is obtained from pretreated biomass.

18. The method of claim **1** wherein said lignocellulose is substantially devoid of hemicellulose.

19. The method of claim **1** wherein said lignocellulose is substantially sterilized.